

CLAIMS

1. Layer made of base plastic comprising, in the dispersed form, nodules with a diameter of less than or equal to one micron comprising barrier plastic incompatible with the base plastic.
- 5 2. Multilayer structure comprising at least one layer according to the preceding claim.
3. Multilayer structure according to the preceding claim, characterized in that the base plastic layer which comprises nodules is an external (inner or outer) layer of the multilayer structure (layer B).
- 10 4. Multilayer structure according to Claim 3, characterized in that it is essentially composed of a hollow body intended to contain a fluid and in that the layer B is the inner layer of the hollow body in contact with the fluid.
5. Multilayer structure according to the preceding claim, characterized in that the hollow body is a fuel tank and in that the barrier plastic is EVOH
- 15 15 (ethylene-vinyl alcohol copolymer) and the base plastic is HDPE (high density polyethylene).
6. Multilayer structure according to any one of Claims 3 to 5, characterized in that it comprises at least one second base plastic layer comprising, in the dispersed form, nodules with a diameter of less than or equal to one micron comprising barrier plastic incompatible with the base plastic (layer C).
- 20 . 7. Multilayer structure according to the preceding claim, characterized in that the layer C is an intermediate layer of the structure.
8. Multilayer structure according to the preceding claim, characterized in that the content of barrier plastic in the layer B is less than 1 % by weight and in that the content of barrier plastic in the layer C is from 1 to 8 % by weight.
- 25 30 9. Process for the manufacture of a layer according to Claim 1 or of a multilayer structure according to any one of Claims 2 to 8, characterized in that it comprises at least one stage of extrusion of a base plastic layer comprising, in the dispersed form, nodules with a diameter of less than or equal to one micron

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comprising barrier plastic incompatible with the base plastic.

10. Process according to the preceding claim, characterized in that it comprises at least one stage of extrusion-blow moulding of a multilayer parison comprising at least one external layer of a base plastic comprising, in the 5 dispersed form, nodules with a diameter of less than or equal to one micron comprising barrier plastic incompatible with the base plastic.

11. Process according to the preceding claim, characterized in that it incorporates a process for recycling at least a portion of a multilayer hollow body comprising at least one barrier plastic layer and one base plastic layer and in that 10 it comprises the following stages :

- the said portion of the hollow body is fragmented;
- the fragments obtained are subjected to at least one electrostatic separation stage, so as to obtain at least one stream (A) of fragments poor in barrier plastic and one stream (B) of fragments richer in barrier plastic;
- 15 – a multilayer parison, having an external layer comprising fragments resulting from the stream (A), is manufactured by extrusion;
- the said parison is blow moulded.

12. Process according to the preceding claim, characterized in that the stream (A) has a content of barrier plastic of less than 1 % by weight and the 20 stream (B) has a content of barrier plastic of greater than or equal to 1 % by weight.

13. Process according to the preceding claim, characterized in that the stream (B) has a content of barrier plastic of less than or equal to 8 % by weight and in that the parison comprises an intermediate layer based on fragments 25 resulting from this stream (B).

14. Process according to any one of Claims 11 to 13, characterized in that, during the electrostatic separation, at least one third stream (C) is generated, the content of barrier plastic of which is greater than or equal to 10 %, and in that this stream (C) is subjected to a subsequent treatment stage which makes it 30 possible to enrich it in barrier plastic.